

# PICTOGRAPH CAVE STATE PARK MANAGEMENT PLAN

## TABLE OF CONTENTS

EXECUTIVE SUMMARY .....	iii
<b>I. INTRODUCTION AND BACKGROUND.....</b>	<b>1</b>
Park Vision .....	1
2020 Vision for Montana State Parks.....	1
History of Pictograph Cave State Park .....	2
National Historic Landmark Status .....	3
<b>II. OVERVIEW OF THE PLANNING PROCESS .....</b>	<b>4</b>
Public Involvement.....	4
Planning Process .....	5
<b>III. PHYSICAL ENVIRONMENT AND     PARK RESOURCES .....</b>	<b>5</b>
Physical Description.....	5
Heritage Resource .....	5
Recreation Resource.....	5
Scenic Resource .....	6
Natural Resources.....	6
Facilities and Infrastructure.....	6
Collections and Documentation .....	7
<b>IV. PARK OPERATIONS AND MANAGEMENT .....</b>	<b>8</b>
Operations .....	8
Staffing and Organization .....	8
Current Funding .....	8
Visitation .....	9
Information Management.....	9
1988 Draft Management Plan.....	9
<b>V. ISSUES AND CURRENT SITUATION .....</b>	<b>9</b>
Issue 1: Rock Art and Geological Stability .....	9

Issue 2: Resource Protection .....	10
Issue 3: Visitor Safety .....	10
Issue 4: On-site Development .....	10
Issue 5: Park as Component of Area Resources .....	10
Issue 6: Economic Contribution .....	10
Issue 7: Interpretive Themes .....	10
Issue 8: Funding .....	11
Issue 9: Research Opportunities .....	11
 <b>VI. GOALS, ACTIONS, AND MEASURABLE OUTCOMES.....</b>	<b>12</b>
Provide a High-Quality Experience.....	12
Slow Physical Deterioration .....	13
Protect the Natural Experience.....	13
Enhance Visitor Safety .....	14
Maximize Coordination.....	15
Recognize Research Potential .....	16
 <b>VII. BENEFITS .....</b>	<b>17</b>
 <b>VIII. IMPLEMENTING THE PLAN.....</b>	<b>17</b>
 <b>IX. REFERENCES .....</b>	<b>18</b>
 <b>APPENDICES</b>	
A) Planning Team Members	
B) National Historic Landmark Statement of Significance	
C) Park Organizational Chart	
D) Advisory Council Members	

# EXECUTIVE SUMMARY

## Introduction

Pictograph Cave State Park is a unique resource valuable in our understanding of the past. This park, located just south of Billings contains Pictograph, Middle, and Ghost Caves and was designated as a National Historic Landmark in 1964. Pictograph Cave is one of the key archaeological sites used in determining the sequence of prehistoric occupation on the northwestern plains.

Montana Fish, Wildlife and Parks decided to develop a management plan for Pictograph Cave State Park for a number of reasons which include both threats to the park and opportunities for the park. Some of these reasons are:

- The Department recognizes what a unique and important resource the park is.
- Groundwater action is affecting the physical integrity of the site.
- Rockfall is a visitor safety concern.
- The Department wants to increase visitation and provide a quality experience.
- The park is one of many heritage sites in the area which could be linked to offer more for visitors.

Many benefits are expected to accrue as a result of implementation of this plan. The primary benefits expected are long-term protection of the archaeological resource, increased visitation to this and other area heritage sites, increased understanding of our past, and a reduced risk of injury to staff and visitors.

## Planning Process

Montana Fish, Wildlife and Parks asked a number of individuals to guide the development of this plan by serving on a

Planning Team. This plan would not have been possible without the knowledge and dedication of the Planning Team members. The members of the team participated throughout the process by identifying issues, developing the vision for the park and actions to implement the vision, serving in liaison roles with other interested parties, working with the media to help encourage interest in the park, attending planning and public meetings, serving as technical experts, and reviewing draft documents. In addition to the work of the planning team, two public meetings and a fee-free day at the Park were held. Planning activities were covered in the local media, encouraging input and participation.

## Issues and Goals

Nine primary issues were identified by the department and planning team early in the process. The issues were used to develop goals and implementing actions.

- What management actions should be taken to address the rock art deterioration and geologic instability?
- How can the heritage, scenic, recreation, and natural resources of the Park be most effectively protected in the present, and for future generations?
- What should be done to ensure visitor safety?
- What is the appropriate level of development at the Park to adequately serve the visitor and meet the vision?
- How can the Park become an integral component of the heritage and recreational resources of the Billings area?
- Recognizing the sensitivity of the heritage resources, how can the Park

best contribute to the economic vitality of the area and the state?

- What are the most important themes for the Park to communicate and what are the best means for communicating them?
- How can needed improvements, ongoing operations and maintenance, and staffing best be funded?
- What is the potential of the Park and its collections to yield additional information about our past and what is the best means of obtaining this information?

From these issues, six goals were developed. Each of the above issues is addressed by one or more of the following goals. Implementing actions and measurable outcomes have been developed for all of the goals as the roadmap for their accomplishment.

- 1) Provide a high-quality experience for all visitors.
- 2) Slow the deterioration of the rock art and back wall of Pictograph Cave and protect the site from physical destruction.
- 3) Protect the integrity of the natural experience at the park.
- 4) Enhance visitor safety at the park.
- 5) Maximize coordination and cooperation with other area heritage sites to attract more visitors of all ages, increase visitors' understanding of the past, and maximize the use of resources.
- 6) Recognize the research potential of the park.

## **Plan Implementation**

This plan has a ten-year horizon. Implementing the plan will move the park towards the stated vision and contribute to the overall integrity of the state park system. As befitting such a resource, the goals are ambitious. While it is recognized that taking the actions to accomplish the goals will fall largely to the Department, a strong public-private partnership will be in the interests of all involved--visitors, managers, and the resource.

# I. INTRODUCTION AND BACKGROUND

## Park Vision

In 2012, Pictograph Cave, well-managed and protected by Montana Fish, Wildlife and Parks, will provide a safe experience whereby:

- Visitors of all ages become engaged in the past and learn the stories of previous occupants.
- Visitors can see rock art images, and understand the site's archaeological significance.
- Each visitor is touched by the past in a setting with few sights and sounds of the modern world.
- Natural geological processes are evident and explained.
- Trails and roads make the park easily accessible to the community.
- The Park is linked to other heritage and recreation attractions in the Billings area.

The vision statement for the Park was created by the Planning Team in conjunction with the Department and the Pictograph Cave State Park Advisory Council.

## 2020 Vision for Montana State Parks

Pictograph Cave State Park is one park in the Montana state park system. In 1998, Montana Department of Fish, Wildlife and Parks adopted *2020 Vision for Montana State Parks*. The state-wide vision was completed after extensive public involvement. According to 2020 Vision, the mission of the state park system is:

“To preserve, enhance, and interpret a diverse representation of Montana’s most outstanding natural, cultural/historic, and recreational resources, for the personal, social, and economic benefit of present and future generations.”

The primary focus of the state park system will be on selectively improving visitor services and maintenance, and ensuring key park resources are protected and enhanced. Highlights of the preferred alternative relevant to this planning effort include:

- Development: Maintaining the current system with carefully-selected new development.
- Acquisition: Retaining the land base with minimal additions emphasizing in-holding acquisition.
- Recreational Demands: Modest incremental change to address new needs.
- Staffing: Stable or a gradual increase in staffing with increased cooperation.

- Funding: Searching for outside, alternative funding sources.

Consistent with this effort, developing management plans for the parks is a key component of 2020 Vision. 2020 Vision provides direction on the contents of a management plan. 2020 Vision also lists specific threats to Pictograph Cave State Park. The following threats from the state-wide vision for Pictograph are addressed in this management plan:

- 1) Legality of access is unclear (this has subsequently been resolved through the purchase of an easement),
- 2) Adjacent land is desirable for development,
- 3) Mineral deposits on the pictographs,
- 4) Vandalism of the pictographs, and
- 5) Visitor safety related to alignment of the interpretive trail.

*2020 Vision for Montana State Parks* provides a useful framework for the preparation of this plan while respecting the unique resources of this important Park.

## **History of Pictograph Cave State Park**

Pictograph Cave had both short-term use (hunting camps) and longer term small group use as long as 7,000 years ago. Pictographs, or pictures drawn on rock, in the cave have been dated to 2,045 years ago.

In 1937, amateur archaeologists uncovered extensive deposits in Pictograph Cave. The Montana Highway Department acquired the site and a Works Progress Administration or WPA-funded crew initiated excavations at

Pictograph Cave. Excavations continued until 1940, recovering over 30,000 artifacts from numerous distinct layers. Pictograph Cave became a benchmark for dating other sites on the great plains of the United States and Canada.

In the 1960's, local interested individuals organized as the Indian Caves Commission worked to achieve recognition of the significance of the site and in 1964 Pictograph Cave became a National Historic Landmark. In 1969 the cave was designated as a State Historic Site, a part of the state park system. Over the next two decades various improvements were made at the Park and the site was first interpreted for visitors.

The recognition of the value of Pictograph Cave by the state legislature resulted in special funding in 1992, for research into the deposition of material on the pictographs and the instability of the sandstone wall. Water seepage was identified as the major factor and steps were taken to reduce the seepage from above the cave. Grant monies were obtained to research what might be done stabilize the wall and restore the pictographs. Several recommendations for cleaning the pictographs were identified by rock art conservation experts, but wall stabilization remained and still remains problematic. For the most part the Department has not yet acted upon these recommendations, however, the direction in this plan addresses the primary issues identified.

Recognizing that the pictographs could be lost, still photography and video were used to record them. The main panels have been traced. Other remaining pictographs were traced and correlated with the drawings done in 1937. Recent work done by MSU-Billings has re-created a panoramic of the panel of pictographs. The project has also produced a digital data base containing information on a proposed visitor center, land survey data, scanned drawings, digital

images, land fly-bys, newspaper articles, material found on the internet, and other materials. University staff have developed a comprehensive website which went on-line in the spring of 2002.

Beginning in 1997, attempts were made to organize a support group. This energy was refocused as an advisory group in 2000. The initial focus of the Pictograph Cave Advisory Group was to assist with obtaining funds for preservation work. Several members of the advisory group also served on the Planning Team for preparation of this park plan.

### **National Historic Landmark Status**

On July 19, 1964, Pictograph Cave was listed as a National Historic Landmark (NHL), National Register Number 66000439. National Historic Landmarks are “places that possess exceptional value or quality in illustrating or interpreting the heritage of the United States.” The significance of the park is in the category of archaeology. According to the listing, Pictograph Cave is “one of the key archaeological sites used in determining the

sequence of prehistoric occupation on the northwestern plains.”

National Historic Landmarks are assessed at least every other year and classified in one of three status categories, threatened, watch, and not threatened. Until 1996 Pictograph Cave had a “not threatened” status. In 1998 it was classified as “threatened.” The threat level was watch in 2000. This status was made because “water seepage through the sandstone is an ongoing threat to the pictographs.” In 2001, the NHL program recommended that a condition assessment be completed to come up with a solution that would minimize the threat to the pictographs.

Similar to a listing on the National Register of Historic Places, National Historic Landmark status has a number of positive implications for Pictograph Cave. NHL status means that the site will be regularly inspected and reported upon to Congress. This status also allows the owner of the site, in this case Montana FWP, access to the technical expertise and resources of the National Park Service. And, finally NHL status provides the opportunity to compete for federal historic preservation grant funds.

## **II. OVERVIEW OF THE PLANNING PROCESS**

### **Public Involvement**

The planning process was designed to solicit public input through a variety of channels including representation on the Planning Team and Advisory Council, Planning Team members serving as liaisons with other groups, direct participation of a county commissioner and a state representative, invitations to the Crow and Northern Cheyenne tribes, newspaper articles, and segments on two of the local Billings television stations.

A formal public scoping meeting, noticed in the Billings Gazette, took place in January 2002. The scoping meeting was held to encourage participation, inform interested individuals about the planning process and how they could get involved, and to solicit issues. A second public meeting combined with a fee-free day at the park were held following preparation of the draft plan in August 2002.

### **Planning Process**

In 2001, the Montana legislature identified Pictograph Cave State Park as a State Parks Division priority and funded work on a park management plan. A contractor was chosen to prepare the plan in October of 2001.

A 10-member citizen planning team was selected to work with the contractor and the Department to guide the preparation of the plan. The team consisted of individuals knowledgeable about the park, representing a variety of scientific disciplines and interests. Planning Team members are listed in Appendix A. A number of the Planning Team members also serve on the Pictograph Cave Advisory Board.

The first Planning Team meeting was held in November of 2001. Five additional meetings were held over the course of the following nine months. One of the Planning Team meetings included a visit to the Park. This meeting was very well attended and resulted in coverage by both the Billings Gazette and Q2 News, the local CBS affiliate. In addition to developing recommendations, the meetings were organized to provide essential information to the Planning Team members on such things as stabilizing the cave wall, the status of the artifact collection, work done on documenting the rock art, and how state parks in Montana are funded. All planning team meetings were open to the public and a number of interested individuals not serving on the Planning Team attended the meetings.

The Planning Team developed the vision statement for the park. The team also identified key stakeholders and outreach methods to involve them, identified the major issues to be addressed in the plan, and generated a variety of alternative strategies for addressing the issues. Finally, the team selected from among those possible strategies the ones they believed would best move the park toward the vision.

The Pictograph Cave Advisory Council was briefed on the progress of the Planning Team following development of alternative strategies. The Council provided input to the Planning Team.

Following the development of the goals and implementing actions by the Planning Team, the contractor drafted the management plan in May of 2002. The Planning Team, Department staff, and the Advisory Council reviewed the draft plan and provided comments. The comments were incorporated into the draft before release to the public.



A second public meeting and fee-free day at the Park were held. Comments from these events were brought back to the Planning Team and the draft management plan was edited to respond to the input. The plan was finalized in the fall of 2002, and submitted to the Director of the Montana Department of Fish, Wildlife and Parks for approval.

### **III. PHYSICAL ENVIRONMENT AND PARK RESOURCES**

#### **Physical Description**

The total area of Pictograph Cave State Park is 22.12 acres. The Park is located along Bitter Creek approximately seven miles southeast of Billings, Montana, and is accessed by the Coburn Road. The elevation of the Park is 3500 feet above sea level. The site is composed of three caves,

Pictograph Cave, Middle Cave, and Ghost Cave located in a 250-foot high Eagle Sandstone formation dating to the late Cretaceous period. The caves were formed by ground water leaching out natural cements that bond the sandstone together. Pictograph Cave contains pictographs or

rock paintings. The paintings currently evident to the naked eye represent a fraction of the rock art that was once visible.

#### **Heritage Resource**

The heritage resource of the Park spans both prehistoric and historic periods. The archaeological record found at the Park dates back to 9,000 years before the present. Information obtained at the site has made important contributions to knowledge not only on the use of Pictograph Cave itself, but also on the use of the larger region and on rock art. Historical use of the area has yet to be comprehensively documented, but known historical uses of the area include homesteading and transportation. The heritage value of Pictograph Cave is the reason for its existence as a State Park.

#### **Recreation Resource**

The primary uses of the Park by visitors are walking the developed trail, learning about past inhabitants, and picnicking. Facilities are not provided for other types of recreation at the Park at this time. Visitors to the Park also watch wildlife and birds. Other potential recreational pursuits such as rock climbing have not been encouraged. After-hours use of the Parks is only allowed when special arrangements have been made.

Proximity to the large population of Billings and the remoteness of the Park have resulted in uses over time which have adversely impacted the Park and archaeological site. These uses have included artifact hunting, vandalism, and drinking parties with associated destructive activities.

## **Scenic Resource**

The caves have a southwest exposure which looks out over grassy rolling hills to the south and west. The hills which drain into Bitter Creek, an intermittent tributary of the Yellowstone River, are privately-owned and undeveloped. These undeveloped surrounding lands which support livestock grazing contribute directly to the visitors' experience. The open lands offer solitude and provide a largely undisturbed vista which appears today much as it must have during the periods of prehistoric and historic occupation of the site. The fore and middle ground views are impacted by park facilities and an overhead power line. The expansive background view remains undisturbed.

## **Natural Resources**

Pictograph Cave receives average annual precipitation of approximately 15 inches. Vegetation on the hills surrounding the caves is a mixture of dry land grasses and sagebrush with a sparse cover of ponderosa pine and juniper. Woody shrubs are found along the Bitter Creek drainage bottom. An inventory of the plants found at the Park along with their historic uses was completed in 1990. This inventory is on file at Fish, Wildlife and Parks, and has been used in developing interpretive materials.

Migratory and non-migratory songbirds and birds of prey inhabit the general area of the Park. Swallows utilize the caves for nests. Bull snakes and rattlesnakes are frequently seen at the Park. The Park also provides habitat for a variety of rodents and small mammals such as mice, chipmunks, rabbits,

porcupines, and marmots. Larger mammals in the general area include fox, coyotes, deer, antelope, and mountain lions.

There is no standing surface water at the Park. Ground water continues to make its way to the surface seeping down the back wall of Pictograph Cave. Bitter Creek, located approximately 300 feet from the base of the caves, contains water on a seasonal basis.

Air quality at the Park is influenced by the nearby city of Billings. The extent to which industrial activity is affecting air quality at the Park is unknown.

## **Facilities and Infrastructure**

Infrastructure and facilities at the park consist of the road and cattle guard; graveled parking area; fee collection box; hard-surfaced walking trail, trail-side benches, and enlarged interpretive area; picnic area with grills and tables; two restrooms; a drinking fountain; entrance, regulatory, and safety signs; trash receptacles; and a trailer for administrative use.

Telephone and electricity are available to the administrative area but interruptions in service are common. The administrative area also has a septic system. There is no well on site, and water is hauled in and stored in two 2,000-gallon cisterns. An underground water line provides water to the drinking fountain near the picnic area. An overhead power line follows Bitter Creek.

The entrance road is three miles long and paved. A perpetual, non-exclusive, 36-foot easement was obtained by the Department in 1998. The easement allows for recreational and administrative use. The road ends in a graveled parking area. One signed accessible parking space with a concrete surface is located where the parking lot adjoins the walking trail. The concrete surface continues to an adjoining portion of

the path, to an accessible drinking fountain, and on to the restroom.

Just east of the parking lot is a picnic area. The picnic area contains free-standing and built-in picnic tables with benches (one located on a concrete pad), fire pits with built-in grills, and trash receptacles. The picnic area sits in the bottom of the draw, providing shade in the hot summer months.

The walking trail begins at the parking area, ascends to follow along the base of Pictograph, Middle, and Ghost Caves, and loops to return to the parking area. The trail is approximately 1000 feet in length and from 24 to 60 inches wide. The hard-surfaced trail is uneven, becomes slick when wet, and has hazardous edges. Grades of the trail as high as 25%, prohibit wheelchair use. A section of handrail exists along the trail on the steep pitch at the base of Pictograph Cave.

Part way up the trail from the parking area is a widened out surfaced area containing interpretive information. This interpretive plaza has a variety of surfaces including gravel, asphalt, and stones set in concrete. The trail has 31 numbered interpretive markers which correspond to a professionally-produced trail guide. The current interpretive subjects cover geological processes, history, archaeology, the pictographs, wildlife, and the view shed.

Interpretive signs and benches are located on steel posts at the interpretive plaza along the hiking trail. Near these interpretive signs is the rock containing the metal plaque which identifies the Park as a National Historic Landmark. Hazard warning and other regulatory signs are placed around the trail.

Signage at the park also includes entrance and visitor orientation information.

The park has two restrooms. The Americans with Disabilities Act (ADA) accessible single-use vaulted restroom was built in the 1990's. The restroom is located in close proximity to the parking lot with access on a concrete-surfaced trail. The second restroom is located off the walking trail in proximity to the interpretive plaza. This restroom has been painted and maintained, but is not to ADA standards and is generally unpleasant to use.

## **Collections and Documentation**

An archival inventory done in 2001 will aid in assessment of potential impacts resulting from ground-disturbing management actions. The inventory accounted for approximately 3,000 artifacts from the original archaeological excavation. A thorough search for artifacts from Pictograph Cave was conducted in the 1960's by Stu Conner. Mr. Conner's letters, and other papers, articles and documents relating to Pictograph Cave and its management, interpretation, and history were catalogued in 2001.

Many artifacts from the site were lost when the Indian Caves Museum located at the Park, was vandalized, burned, and robbed in the 1940's. The bulk of the remaining Pictograph Cave excavation material is housed at the University of Montana. The material represented there includes flaked and ground stone tools, bone tools, fibers, and faunal remains. The collection is used as a teaching tool by the University. A number of Master's degree thesis projects have been completed using the collection.

The collection is owned by the state of Montana, but the specific ownership status of this collection within the state is undetermined. Also housed at the University Library Archives is a series of butcher paper drawings of the original pictographs in chalk and pastels.

The Montana Historical Society (MHS) has about 41 pieces of material from Pictograph and Ghost Caves. The pieces include mixed stone, bone, and wood artifacts. The collection was donated to the MHS by Walter Vanaman in 1989. The MHS Photographic Archives also has prints dated 1937 and 1938 showing the landscape and appearance of the caves before, during, and following excavation.

Additional artifacts from the site, specifically some 40-50 pieces of pottery, may be housed at the University of Michigan. Montana Fish, Wildlife, and Parks has a small collection of artifacts.

## **IV. PARK OPERATIONS AND MANAGEMENT**

### **Operations**

The Park is currently open to the public from May through September. Activities at the Park include walking the trail, picnicking, learning about history, geology, and archaeology, and viewing birds and wildlife. Daily hours of operation are 8 a.m. to 8 p.m. during the months of July and August. Operating hours from May 1 to June 30, and from September 1 to September 30, are 10 a.m. to 7 p.m. daily. The gate on the road to the Park is locked and chained when the park is not open. The surrounding landowner, utility companies, and emergency service providers have keys to the gate. Special tours and off-season

requests to use the park are accommodated consistent with the values of the Park. Group uses are administered under special recreation permits.

### **Staffing and Organization**

The Park is managed by a Park Operations Specialist. This specialist has significant management responsibilities in addition to Pictograph Cave. One quarter of the manager's time is available for Pictograph Cave. In addition to the manager, there are two fulltime seasonal staff and support from the Regional Parks' Manager. Volunteer service at the park increased significantly in 2001 due to the presence of an on-site host. The total number of volunteer hours in 2001 was 260. Volunteers are involved in maintenance activities, tours, office duties, and planning.

### **Current Funding**

Funding for Montana's 42 state parks is generated by the sale of state parks passports, entrance fees, special permits, the state's accommodation tax, and interest from coal tax severance deposits. The funding for Pictograph Cave State Park is derived from the following sources, 40% coal tax severance and 60% earned revenue. Small amounts of additional money are received from both the general fund and the accommodations tax, for noxious weed treatment, construction, and maintenance.

The current annual budget for the Park not including salaries is approximately \$8000. This amount must cover maintenance, utilities, uniforms, support for the management plan process, equipment maintenance, signs, water purchases, and the website. Salaries and wages for work at the park total just under \$40,000 annually. Grants and/or special funding are periodically obtained for specific projects. Funding for operations and maintenance,

improvements, and staffing is an ongoing challenge for Pictograph Cave State Park.

## **Visitation**

Visitation of Pictograph Cave State Park, determined by vehicle counters, has remained relatively constant at about 21,000 visitors annually. Average daily visits over the past decade during the months of operation range between 50 and 100 persons.

## **Information Management**

Montana Fish, Wildlife, and Parks has been actively inventorying and locating materials and information from and about the site currently found in a variety of places. This is an ongoing task. General information about the Park/site is available to the public from several sources. These sources include the Department's website, a website developed and maintained by MSU-Billings ([www.pictographcave.org](http://www.pictographcave.org)), the National Historic Landmark website, and a rack card placed at the Chamber of Commerce in Billings and distributed to other area heritage museums and attractions. Tim Urbaniak, Montana State University-Billings, College of Technology deserves special thanks for his efforts to consolidate information and make it available on the website.

## **1988 Management Plan**

A draft management plan for the Park was prepared in 1988. The draft plan contains the following sections: History, Present, Management, Physical Characteristics, Land Use, and Administration. Management goals, objectives, and activities were developed related to site security, constituency, improvements, fire protection, weed control, interpretation, and problem areas. The plan lists potential funding sources in addition to Fish, Wildlife and Parks, current and future personnel

allocations, potential income generators at the site, and contains a general timetable for accomplishing the activities. The management plan was not developed with public involvement and never formally adopted. Although some of the actions recommended in the plan may have occurred at the Park, the recommendations have not been implemented in any systematic manner.

## **V. ISSUES AND CURRENT SITUATION**

### **Issue 1: Rock Art and Geological Stability**

*Issue Statement : What management actions should be taken to address the rock art deterioration and geologic instability?*

**Current Situation:** The wall of Pictograph Cave has been seriously impacted by water seepage from one or more sources. The seepage has caused both spauling of rock from the wall and deposition of material over the pictographs. Much of the rock art is no longer visible on the wall of Pictograph Cave. Earlier vandalism of the pictographs was removed by sand blasting. The sandblasting adversely affected the rock art as well. Rock periodically falls from the walls and roof of the caves.

## **Issue 2: Resource Protection**

*Issue Statement: How can the heritage, scenic, recreation, and natural resources of the Park be most effectively protected in the present, and for future generations?*

Current Situation: Vandalism has occurred at the site in past years and continues on a sporadic basis. The view from key features of the Park is an important part of the experience provided by the park. This view is provided because private land adjacent to the Park has not been developed. Given the proximity to Billings, it is foreseeable that there will be development pressure on at least some portions of this land. Air pollution in the Yellowstone Valley may be having an effect on the Park's heritage and geological resources.

## **Issue 3: Visitor Safety**

*Issue Statement: What should be done to ensure visitor safety?*

Current Situation: Visitors on the trail are subject to potential rockfall from the caves and rock walls. The trail surface is slick when wet, the grade of the trail is steep, and the edges of the surfacing are hazardous to pedestrians. Other visitor hazards include high temperatures and rattlesnakes.

## **Issue 4: On-site Development**

*Issue Statement: What is the appropriate level of development at the Park to adequately serve the visitor and meet the vision?*

Current Situation: Development at the Park is minimal. Development includes a parking area, trail, restrooms, picnic area, signage, and an administrative trailer. The Park currently provides a totally outdoor experience.

## **Issue 5: Park as Component of Area Resources**

*Issue Statement: How can the Park become an integral component of the heritage and recreational resources of the Billings area?*

Current Situation: Pictograph Cave State Park is one of a number of heritage and recreation sites in the Billings area. Other sites are managed by the City of Billings, the Bureau of Land Management, the National Park Service, and Fish, Wildlife and Parks. The opportunity exists for visitors to Pictograph Cave to also go on to other area attractions and for visitors of these other attractions to come to Pictograph Cave. Many of these other sites have direct interpretive relationships to the Park resources.

## **Issue 6: Economic Contribution**

*Issue Statement: Recognizing the sensitivity of the heritage resources, how can the Park best contribute to the economic vitality of the area and the state?*

Current Situation: Pictograph Cave State Park is used by people from outside the area as well as locals. The park has the potential to provide economic benefit to the area through increased visitation and increasing the length of stay of visitors from outside the area.

## **Issue 7: Interpretive Themes**

*Issue Statement: What are the most important themes for the Park to communicate and what are the best means for communicating them?*

Current Situation: Pictograph and associated caves are interpreted to visitors by means of the trail guide, interpretive

panels, and paid staff and volunteer on-site interpreters. The trail guide contains information about the site's geology, Bitter Creek, wildlife and plants, previous occupants of the site, the pictographs, archaeological excavation, historic homesteading and transportation, the view from the site, and the National Historic Landmark designation. A website containing additional information about the park has been developed in conjunction with Montana State University-Billings and the Western Heritage Center. Learning trunks are available for school classes.

## **Issue 8: Funding**

*Issue Statement: How can needed improvements, ongoing operations and maintenance, and staffing best be funded?*

Current Situation: The most recent operating budget for the Park including

staffing, operations and maintenance was approximately \$48,000. Annual revenue from the Park is \$16,000. At present, the Park does not generate revenue sufficient to fund its minimal costs. Funds will be needed for any additional development at the Park.

## **Issue 9: Research Opportunities**

*Issue Statement: What is the potential of the Park and its collections to yield additional information about our past and what is the best means of obtaining this information?*

Current Situation: The Park itself along with collections of material have the potential to answer additional questions about our past. Research questions have not been formally identified.

## VI. GOALS, ACTIONS, AND MEASURABLE OUTCOMES

The following goals and implementing actions were developed based upon the identified issues discussed above. The goals are not correlated one on one with the issues because of the overlapping nature of the issues and the actions needed to address them. Taken as a whole, however, the goals address all of the issues identified.

***GOAL: Provide a high-quality experience for all visitors.***

Implementing Action	Measurable Outcome
Develop an interpretive plan that addresses on-site interpretation and reaching out beyond the park through a variety of media types.	Interpretive Plan
Work with local and state elected officials and area partners to build support for a visitor center.	Commitments by partners
Determine functions desired of a visitor center (which would include rock art replicas at some scale) and evaluate possible locations for a visitor center both on and off-site.	Plan for Visitor Center
Investigate funding options for construction, and operation and maintenance (including staffing) of a visitor center.	List of potential grant sources
Continue to provide a professional presence at the park which includes increased staff, interpretive programs, and improved facilities.	Increase in visitation
Remove non-accessible restroom. Replace with accessible restroom.	Removal of non-accessible restroom. Construction of new accessible restroom.
Following the depletion of existing brochures, redesign the trail markers using symbols of artifacts and pictographs which allow for using the trail in either direction, but encourage its use so that Pictograph Cave is approached from the north.	Redesigned trail markers and corresponding brochures
Provide an undeveloped/tread hiking opportunity by brushing out a pathway to the spring area.	Pathway created and used



***GOAL: Slow the deterioration of the rock art and back wall of Pictograph Cave and protect the site from physical destruction.***

<b>Implementing Action</b>	<b>Measurable Outcome</b>
Continue efforts to manage water above the cave.	Seepage down cave wall reduced. Damage to pictographs is reduced.
Continue to monitor rock movement.	Data on rock movement
Partially backfill the cave floor to wick moisture away from the cave wall. Study the results of this action to determine its effectiveness.	Backfill in place. Documented observations on results of backfill
Initiate additional rock movement monitoring project.	Data on rock movement.
Study the impact of pollutants on the rock.	Data on pollution impacts
Working with the adjacent landowner, develop a plan to limit inappropriate access to the Park.	Access plan for Park.

***GOAL: Protect the integrity of the natural experience at the park.***

<b>Implementing Action</b>	<b>Measurable Outcome</b>
Ensure that any ground-disturbing actions at the Park consider and avoid where possible, impacts to archaeological resources. Where impacts are unavoidable, mitigate appropriately.	Cultural resource inventory and evaluation. Mitigation as necessary.
Utilize the existing view shed map to identify the most critical areas for protection.	Highest priority areas for protection identified
Pursue acquisition of scenic easements from landowners in the view shed based upon the mapping and prioritization effort above.	Scenic easements in place
Ensure that any additional improvements to the Park are sensitive to the visual quality at and from the site.	Improvements not visually dominant
Monitor and comment on any proposed development with the potential to generate noise or particulate matter which could affect the solitude or resources of the park.	Development sensitive to Park resources

Monitor and work with Yellowstone County to minimize or mitigate the impacts of proposed land use changes that have the potential to affect Park resources.	Land use change sensitive to Park resources
During the ten-year planning period, pursue fee title expansion of the park's land base only as necessary to accommodate facilities out of the view shed.	Land acquired, if necessary
Explore opportunities for a three-party land exchange capitalizing on the value of lands not in the Park or Park vicinity as a long-term means of protecting the view shed and air shed surrounding the park.	Three-party land exchange consummated
Develop a policy for recreational uses of the Park that addresses which uses are compatible with the goals of this plan. Specifically address rock climbing as a use which is not allowed.	Use policy completed
Relocate the overhead power line as opportunities arise to cooperate with the power company.	Overhead power line removed from view

***GOAL: Enhance visitor safety at the park.***

<b>Implementing Action</b>	<b>Measurable Outcome</b>
Continue to monitor rock movement.	Data on rock movement
Implement plans to make accessible, the walking trail from the parking area to the interpretive plaza and the plaza surface.	Accessible trail between parking area and interpretive plaza. Accessible interpretive plaza.
Relocate the existing pedestrian trail away from the base of Middle Cave.	Trail in new location
Widen the relocated section of trail to four feet.	Trail widened to four feet
Mitigate the pavement edge hazard along the remainder of the trail.	Pavement edge hazard mitigated
Evaluate the need to install additional handrail along steeper segments consistent with visual quality objectives.	Additional handrail locations identified
Use a combination of signage and physical barriers such as rock, to discourage visitors from entering the caves.	Signs and barriers in place

Incorporate risk management into day-to-day operations and staff training, and safety information into written materials, brochures, videos, and on-site signage.	Reduction in injuries and accidents involving staff and visitors
In cooperation with the surrounding landowner, secure the site from unauthorized visitation when the park is closed.	Park secured after hours

***GOAL: Maximize coordination and cooperation with other area heritage sites to attract more visitors of all ages, increase visitors' understanding of the past, and maximize the use of resources.***

<b>Implementing Action</b>	<b>Measurable Outcome</b>
Integrate lessons from Pictograph Cave into curriculum of local schools and if possible into Project Archaeology's national curriculum.	Pictograph Cave included in local and national curricula
Maintain and promote the use of learning trunks in the schools.	The two existing trunks are fully utilized
Formalize and expand the existing marketing strategy to distribute information and make people aware of the benefits of visiting the Park.	Marketing strategy formalized
Expand special events at the Park consistent with the values of the Park.	Two special events per year are publicized and held
Support the website ( <a href="http://www.pictographcave.org">www.pictographcave.org</a> ) developed by MSU-Billings by providing up to date information on events and activities at the park.	Website updated four times per year
Coordinate with the Billings Cultural Partnership on distribution of information and promotion of Pictograph Cave and other area heritage sites.	Information on Pictograph Cave is provided to Cultural Partnership
Investigate the feasibility of a physical connection to link Pictograph Cave State Park with the Four Dances area managed by the Bureau of Land Management and other area trails.	Meeting with FWP, BLM, and Yellowstone County
Using signage such as an "area attractions" map, direct visitors at Pictograph Cave State Park to other area heritage attractions and work with other heritage attraction administrators to direct visitors to Pictograph Cave.	Area attractions map that can be placed at Pictograph Cave and other area sites

In addition to providing interpretive tours of the Park by request, develop regularly scheduled tours. Publish the schedule.	Regular schedule for tours Schedule published
Utilize the updating of the FWP Regional Office visitor area to feature Pictograph Cave State Park. Add information about Pictograph Cave to the Lake Elmo information displays.	Exhibits/information at Regional Office and Lake Elmo on Pictograph Cave
Develop a promotional video about the park including references to other area sites. Make this video available to area service clubs, the Chamber of Commerce, and others.	Video developed Video shown to at least two service clubs per year

***GOAL: Recognize the research potential of the park.***

<b>Implementing Action</b>	<b>Measurable Outcome</b>
Continue efforts to collect all information pertaining to the Park including information generated from student work at the site or with the site collection.	Listing of known information maintained by FWP is current
Continue research into methods for cleaning the pictographs on the rock wall. As recommended by the Research Technical Committee and as appropriate, test best methods on a small area of the art.	Data on wall cleaning methods. Test project.
Establish a formal Research Technical Committee to review research proposals and advise the Department on research matters on a regular basis.	Research Technical Committee established
Develop a research plan for the park.	Research Plan
Host a research forum about the site.	Forum planned, held, and documented
Convert information about the site to formats that make it more easily accessible to researchers and the public.	Documents on CD's and website
Working with area universities, research historic use of the area.	History of area

## VII. BENEFITS

The commitment of Montana Fish, Wildlife and Parks to develop this management plan for Pictograph Cave State Park is a reflection of the enduring value of the Park's resources to the citizens of Montana and the role of this Park in the state park system.

The following benefits are expected to accrue as a result of implementing this plan.

- 1) Long-term protection of the physical resources of Pictograph Cave State Park and the archaeological resource.
- 2) Increased visitation at the Park and other area heritage sites accompanied by a corresponding increase in fees generated by the Park and revenue to the Billings area by non-local visitors. (One out-of-area "travel group" of 2.4 people spends an average of \$115.00 in Billings in one day.)
- 3) A visitor experience that promotes increased understanding about our past and the role of Pictograph Cave in interpreting our past.
- 4) An educational experience without physically visiting the Park that promotes increased understanding about our past and the role of Pictograph Cave in interpreting our past.
- 5) Reduced risk of visitor and staff injury and/or death.
- 6) Increased knowledge gained from the archaeological and historical records from and about the Park.
- 7) A quality recreation experience at one park in the state park system.

## VIII. IMPLEMENTING THE PLAN

This management plan has a ten-year horizon. Implementing the management plan will move the Park toward the stated vision and contribute to the integrity of the overall state park system. Implementation of any plan is dependent on obtaining the resources to proceed. While resources will be necessary to successfully implement the plan, it is anticipated that the plan itself will be useful in articulating the funding and staffing needs of the Park.

Future funding of the Park at the current level will allow the Department to continue staffing, maintenance, and visitor services at present levels. Periodic availability of small amounts of additional state monies may provide for modest infrastructure improvements resulting in goal accomplishment over time.

The priorities developed in this management plan are intended to guide the work of the Department within whatever level of resources becomes available. Generally, continuing the actions that the Department has already undertaken will be the highest priority to complete. For example, water management on top of the cave would continue as a high priority action. Next in priority would be implementing actions that meet more than one goal, such as the monitoring of rock movement which addresses both resource protection and safety goals.

At this time, it is impossible to identify all of the partnering and funding opportunities which could present themselves. Should there be an opportunity to accomplish a lower priority item contributing to one or more of the goals without directing significant resources away from a higher priority item, that opportunity would be pursued. As an example, although the

funding and means to relocate the overhead power lines from the view shed have not been identified as a high priority item for this ten-year planning period, if the power company offered to do the project independently, the Department would allocate staff time to the effort because the action would move the Park closer to the goal of protecting the view shed and natural environment.

The goals contained in this plan will serve to guide the work of the Department and its partners toward achieving the vision for the Park. Approximately one year following adoption of the plan, the Department will schedule a meeting of the Advisory Council to which Planning Team members will be invited. At this meeting, progress in implementing the plan will be reviewed and a progress review with the Advisory Council will be scheduled annually for each of the nine following years for the life of this plan.

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## **APPENDIX A**

### **Planning Team Members**

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## **APPENDIX B**

### **National Historic Landmark Statement of Significance**



## **APPENDIX C**

### **Park Organizational Chart**



## **APPENDIX D**

### **Advisory Council Members**

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